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ABSTRACT

In 1997 a survey designed to measure career progress was administered to 1,064 graduates of the University of Sussex (England) who had responded to a previous career progress survey administered in 1995. Of the 585 individuals who completed the 1997 survey (response rate 58.3%), 47%, 22%, and 31% had graduated from the university in 1991, 1992, and 1993, respectively. As of May 1997, 86% of the graduates had moved into employment (versus 78% in July 1995). Only 4% of the respondents were unemployed, and only 7% were self-employed. On average, the graduates' salaries had improved. As in 1995, the highest earners were graduates from engineering and mathematical sciences. Sixty percent of the graduates changed jobs during the past 2 years. Nine out of 10 graduates considered their degree relevant to their job in some way, including 62% who said their work required graduate ability and 67% who said it was helpful in getting their job. The graduates' self-perceived level of underemployment had fallen to 49% from 60% in 1995. (Sixteen tables/figures are included. Appended are the following: summary of the study findings; survey instrument; and survey methodology, and 18 tables. The bibliography contains 10 references.) (MN)

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Executive Summary

After an initial slow and turbulent start for many graduates in the early 1990s, career patterns have become less varied and more settled. Four to six years after gaining their first degree, most graduates are in jobs, the majority of which are high level occupations. An increasing proportion now view their jobs as requiring 'graduate ability' and most are generally satisfied with their career development to date. Underemployment has declined in the last two years, but not disappeared altogether. Temporary working has also reduced and geographical mobility is low. There are fewer now in further study than two years ago but there continues to be a relatively high level of commitment to continuous learning.

Introduction

These are the key findings from the second follow-up survey of graduates from the University of Sussex. Undertaken earlier this year, the survey was based on the responses of almost 600 graduates from the years 1991 to 1993. They were first contacted in 1995.

This report is a sequel to the first survey report — *What do Graduates Really do?* It focuses on employment and career outcomes two years on. By linking the data with that from the earlier survey, full and detailed career histories over a four to six year period have been analysed, thus providing up-to-date information about medium term employment and career paths. This will be of benefit for current students in helping them to decide about career options, but also it provides a more realistic perspective about graduate outcomes than the one commonly used which is focused on initial destinations.

The survey was once again undertaken by the Institute for Employment Studies (IES) in collaboration with the Career Development Unit (CDU) of the University of Sussex (UoS), as a joint initiative by IES and UoS.

The survey analysis is based on an achieved sample of 585 graduates who participated in both surveys. This represents 63 per cent of those who were sent questionnaires in the 1997 survey. The sample profile is very similar in characteristics to the larger 1995 survey (and similar to the university's graduate

output for the years covered), the only real variation being in the higher proportion of women respondents.

The main findings are as follows.

Where are they now?

- More graduates had moved into employment: 86 per cent were in jobs in May 1997 compared with 78 per cent at July 1995. More graduates from all three yearly cohorts had moved into jobs, with percentages rising fairly evenly across the three years. This is likely to be partly due to the more favourable labour market conditions in 1997 compared with 1995.
- Unemployment was low, at four per cent, and slightly down on the 1995 level. This is similar to the national average for people with high level qualifications. Most had been unemployed for less than one year, and very few had been unemployed also at the time of the 1995 survey. Among the unemployed were a number who had recently completed their PhDs.
- Further study (as their reported main activity) had reduced slightly over the two years, from 15 to 12 per cent. This included a small proportion (four per cent of the total sample) who were doing both jobs and studying, equally. The majority of current students were doing PhDs. Only one in three of those who had been in further study two years ago were still doing this as their main activity. There was evidence of people moving back into study after a few years working, as well as a small number of people who had been in further study for most of their post-graduation period.
- In total, 44 per cent of graduates had gained a postgraduate qualification by this stage, mainly a masters or professional qualification.
- The main differentiating factor in current activity status at this stage was, as in the 1995 survey, degree discipline. Science graduates, especially biological science, were more likely to be in further study than employment, while engineering graduates had the highest proportion in employment. More mature graduates were economically inactive, but unemployment levels were similar to the sample as a whole.
- A significant minority (23 per cent) were still living in Sussex and almost three-quarters (74 per cent) in the South of England region. Geographical mobility over the previous two years had been very low (1995 comparative figures were 25 per cent Sussex counties and 76 in the South of England). Of particular note was that one in five of the 1991 graduates were still living in the Sussex counties some six years after getting their degrees, indicating the importance of the local labour market not just in the short term.

What kind of jobs?

- Most were employees, and only seven per cent were self-employed. The latter has changed little in the last two years. Permanent contracts were generally the norm (one in five in temporary jobs).
- There has been a general shift upwards in level of jobs in the last two years: 88 per cent in jobs were now in the top three occupational groups, compared with 78 per cent in 1995, including 22 per cent now in the top group of managerial/ administrative occupations, compared with 13 per cent two years ago. This upward trend by level was evident for all three yearly cohorts.
- Salaries had also improved on average. One in three in jobs were now earning annually £20,000 plus, but this rose to 43 per cent of the 1991 cohort. The highest earners were still graduates from engineering and mathematical sciences.
- As in the 1995 survey, there was a wide range of employment sectors represented, the largest being IT/business services and education (each 19 per cent of the total in jobs). Media/arts and R&D sectors had increased their employment share over the two years. Both are associated with slower starts to careers and especially the latter, with postgraduate study.
- One in three were working in firms with less than 200 employees and one in eight in very small firms of under 20 employees. There has been a slight shift away from employment in small firms over the last two years. This is likely to be due in part to the influx of postgraduates to R&D work and higher education sectors, where organisations are generally larger.
- Sixty per cent of graduates had moved jobs in the last two years, mainly for reasons of promotion, to improve prospects and to change career direction. Considerably fewer (around 30 per cent) had changed employing organisation, and as mentioned above, even fewer had moved location (to another region), indicating a relatively low level of mobility in general.

Are they in graduate jobs?

- Nine out of ten graduates felt their degree was relevant to their job in some way, including 62 per cent who said the work required graduate ability and 67 per cent who said it was helpful in getting their job. These figures are higher than for graduates in jobs two years ago. They reflect the movement upwards in job level over time, and the slow starts that some had to their careers (*nb*: the 1995 survey highlighted the diversity of initial career paths, with many having to take temporary low level work initially).

- Although a higher proportion of graduates were now in jobs previously held by graduates (43 per cent), almost half of the total in jobs (46 per cent) said that a degree was not an entry requirement. One in four of the latter felt that their job had been upgraded while they had been in post so that it now required graduate ability, showing the dynamic nature of jobs and the difficulties in defining a graduate job by entry qualification alone.
- The level of underemployment (self-assessed) has also fallen since the last survey, from 60 per cent to 49 per cent who felt very or slightly underemployed. The drop in the former was more marked: only 12 per cent felt very underemployed in 1997 compared with 26 per cent in 1995. This still leaves, however, around half of the graduates feeling slightly underemployed in their jobs, which suggests that some underemployment for many graduates continues beyond the first few years.
- Perceptions of underemployment relate closely to level of job: as might be expected, the vast majority of those in clerical or secretarial and sales jobs felt underemployed (83 and 77 per cent respectively). Those who had obtained professional postgraduate qualifications were the least likely to feel underemployed (36 per cent).

Are they satisfied with career development?

Despite this residual level of perceived underemployment, most graduates were satisfied with their career development to date, both overall and particular aspects of it. The areas of least satisfaction were the use being made of their degree and the pace of career progress, followed by earnings. Satisfaction improved over time, with the 1993 graduates (who had only been four years in the labour market) being the least satisfied overall. It also improved with increasing level of current job.

What kind of career paths?

The career path analysis provided evidence of a continuous improvement in labour market success over the six years, but also more stability in career patterns beginning to appear after a few years. Specifically, there were:

- more graduates in jobs and fewer unemployed or doing further study at the four year stage, compared with the first year, and this applied to all cohort years, and
- after about four years there appeared to be little further change overall in career patterns.
- There was also a reduction in the number of identifiably different career paths being followed, from 58 in the previous survey to 32 in this survey two years later. Also, the number

of different career profiles in the four to six year period for the 1991 graduates was half that of the previous four years.

- The most common career profile for the 1991 graduates was 'continuous' employment over the six years, but this applied to only 25 per cent of them. It rose to 68 per cent, however, when only the latter two and a half years were taken into consideration.
- Although the proportion in further study declined steadily during the initial post-graduation period, after about four years it began to stabilise. From then on, around one in ten were undertaking further study as their main activity, an indication of their commitment to continuing education.

There was no evidence that initial 'bad starts' due to adverse economic conditions prevailing at the time of graduation (seen in the higher initial unemployment levels for 1992 graduates) have had any major lasting effect on career patterns. There continued to be, however, differences between graduates according to gender, age and degree discipline which were highlighted in the earlier survey. In particular:

- Women continued to have lower unemployment levels than men up to six years after graduation, although the gap reduced over time, but not in a consistent way.
- Mature students continued to experience more unemployment on average, although the gap here too was seen to vary and reduce over time.
- Graduates in engineering and mathematical sciences were more likely to be in employment at most points in time, while those from the physical sciences were more likely to be undertaking further study at all points in time. Indeed, at the four year stage, 20 per cent of physical science graduates were mainly doing further study, only slightly down on the 28 per cent in this activity at the first year stage.

The survey also enabled individual career histories to be presented as examples of the ways careers have developed over time for different kinds of graduates. These provide further evidence of the way careers for many graduates take several years to take shape and become established.

Conclusion

This second survey of Sussex graduates has provided a rare insight into what becomes of graduates up to six years after leaving university. As far as we are aware, it is the only current longitudinal survey of its kind which charts the careers paths of a cross-section of graduates who came onto the UK labour market in the early 1990s.

In many ways, it has demonstrated the greater benefits to be derived from this kind of approach to investigating the graduate labour market, than that based on the annual First Destinations Surveys (FDS). This is especially so for universities like Sussex, where substantial numbers of their graduates take non-vocational degrees and where postgraduate study after a first degree is a common route followed.

The survey's findings are the positive upward career progression shown by most graduates and the increasing stability of careers. From a methodological perspective, it has also shown that a useful time to choose to follow up graduates for investigating early careers is at three years after graduation when career patterns begin to settle down.

1. Introduction

1.1 Background

The graduate labour market of the 1990s has become a much more complex and more fluid place than in earlier decades. On the supply side, it has had to accommodate a much larger output of graduates with more varied backgrounds and academic experiences, while on the demand side it has been subject to the economic and business cycles, as well as changes in employers' skill requirements and longer term shifts in individual career patterns (La Valle *et al.*, 1996; Connor *et al.*, 1996; Hirsh and Jackson 1995).

Much of the research on the changes to the graduate labour market in the 1990s has been focused on initial destinations of graduates, *ie* snapshots of what they were doing in the first six months (see Survey of First Destinations of Students (FDS), HESA, 1996). There has been rather less attention given to their subsequent career progress and employment outcomes after three, five or even ten years. Yet the transition between HE and employment is becoming increasingly complex and covering a longer time period. More graduates are taking postgraduate study or delaying their entry to the labour market in other ways, more are taking temporary jobs initially, often to pay off debt, and are generally taking longer to settle down into chosen careers (Connor, 1997). As a consequence, the FDS is increasingly viewed as too early a snapshot and inadequate in providing insights into what different graduates really do. There is also increasing interest in understanding more about the 'quality' of their jobs than simply occupational destinations and the different paths graduates follow in the early years of their careers.

In order to focus more on medium term employment outcomes and career development, a follow-up survey of over 1,000 graduates from the University of Sussex was undertaken in early 1995, up to three and a half years after the graduates completed their first degrees. The report of this survey *'What do Graduates Really do?'* (Connor and Pollard, 1996) provided new information and greater insight into the nature of graduates' jobs and their initial career paths. It also provided feedback on career satisfaction and how their experiences matched their expectations about jobs and careers (see Appendix 1 for summary findings).

In 1997, it was decided to re-contact the 1995 survey respondents to find out what they were doing currently and how careers had developed in the intervening two years. This is the subject of this report. By linking the findings of the second survey with the earlier one, it has been possible to assemble full and detailed career histories over a four to six year period for almost 600 graduates, and also make comparisons between different years of graduate output at particular points in time.

1.2 The 1997 survey

The survey covered the same graduates from years 1991 to 1993 who had responded to the first survey in 1995. For the 1991 graduates, this was now nearly six years after taking their first degree, for the 1993 graduates almost four years.

The main aims of this second survey were:

- to provide up-to-date information about progress of a group of graduates who entered the labour market at the beginning of the 1990s decade (*ie* after a period of six years)
- to analyse trends over time by making comparisons between different graduate years at particular points in time (*eg* 1991 and 1993 graduates at four years after graduation).

The survey is almost unique in following up a large cohort of graduates from a wide range of disciplines and backgrounds during the turbulent years of the 1990s in this way. Other surveys, such as the large Scottish study of 1992 graduates two years on (Levey and Mackenzie, 1996) had looked at changes over time in jobs but not at the level of detail of the Sussex survey, while others have been relatively small scale studies focusing on subject groups.

Particular issues which the second survey of Sussex graduates sought to explore were:

- How varied are graduate careers over the medium term? What are the key differentiating factors — degree discipline, gender, age?
- Do the relatively complex initial patterns of employment/study/unemployment, highlighted in the first survey, continue? If so, for how long?
- How long do graduates really take to settle down in the labour market? Is this timescale changing?
- Is 'under-utilisation' applicable mainly to first jobs or early stages of careers?
- Where can current final year students expect to be in say four or five years time?

- What are the medium term financial returns to HE for different groups of graduates? Do earnings vary according to graduate characteristics or career paths?
- What effect does a 'bad start' due to poor labour market conditions (see for example that experienced by the 1992 graduates in particular) have in the longer term? Do they continue to experience relative disadvantage?

As before, the survey was undertaken jointly by staff in the IES and CDU, under the auspices of the IES/UoS Joint Research Fund.

1.3 Survey methodology

A questionnaire was developed, based on the previous questionnaire for comparability purposes but much shorter in length and more focused (a copy is attached in Appendix 2). It included questions on their current labour market status (*ie* in work, further study, unemployed or something else) and location, and their labour market status, at six monthly intervals since the last survey. It asked in detail about their current job and also about career satisfaction to date.

Questionnaires were mailed out to 1,065 graduates (all the 1995 survey respondents) in April 1997. After two reminders, the survey was closed in mid-July with a total of 605 valid questionnaires returned, giving an effective response (*ie* excluding Post Office returns, blanks, *etc.*) of 67 per cent.

The 1997 survey data were matched to the 1995 data on an individual case basis and a new file created containing data from both surveys. This comprised 585 cases (a smaller number because twenty of the 1995 respondents had replied late and were not found on the 1995 survey analysis file). This report is based on these 585 respondents (*nb*: at the time of writing a further 16 late questionnaires have been received).

There were very few and only small variations in the composition of the 1997 sample (of 585) compared to the larger 1995 sample (of 1,023). The main difference was in the slightly higher proportion of women than men that responded to the 1997 survey. In other respects the two samples were almost identical. These are the key characteristics of the 1997 survey sample.

- The largest group were 1991 graduates, representing 47 per cent of the total; a further 22 per cent graduated in 1992 and 31 per cent in 1991. This is an identical breakdown to the 1995 survey sample (*nb*: the bias to 1991 was an original sampling decision in 1995).
- Women represented 60 per cent, men 40 per cent. The former is slightly higher than in the 1995 sample (56 per cent women) which is in turn slightly higher than the percentage of women

among Sussex graduates in the sample years (52 per cent). It is the main area of sample bias in the survey.

- They was a predominantly young group of graduates: half were aged under 27 years in 1997 and only five per cent were over 40 years of age. While students, only 16 per cent were classified as mature (*ie* aged over 21 years on entry to degree course), again the same percentage as in the 1995 sample.
- Only nine per cent were from ethnic minority groups; and the vast majority had 'A' level or equivalent qualifications at degree entry (87 per cent) with good grades (40 per cent had over 21 'A' level points (*nb*: the same breakdown as in 1995).
- 31 per cent graduated with degrees in social sciences, 23 per cent in arts and humanities, 24 per cent in pure sciences, and 21 per cent in applied sciences. This breakdown is very similar to that in 1995, but it is slightly over-representative of the population of social scientists for the relevant years (25 per cent, which relates to the female bias in these disciplines).

Further details of the survey methodology and achieved sample are shown in Appendix 3.

1.4 Report focus and contents

The main focus of this report is the jobs graduates held in 1997 compared to those in 1995, and their career paths to date. In Chapter 2 their current employment is analysed. Current jobs are discussed in more detail in Chapters 3 and 4. Chapter 5 provides an analysis of career paths and looks at different career profiles. The Appendices provide more details of the sample, questionnaire and data analysis.

2. Where Are They Now?

This chapter focuses on the current activity of the graduates, that is their main activity (*ie* in work, further study, unemployed, *etc.*) in May 1997. It also analyses location.

The key points are:

- more graduates now in jobs: 86 per cent of the total
- low unemployment levels
- one in eight in further study (as main activity), mainly doing PhDs
- almost one-half of the total sample had gained a postgraduate qualification by this time
- degree discipline is still a major influence on activity pattern
- less difference now between men and women and by class of degree in activity pattern, but age differences still evident
- low geographical mobility
- more uniformity now beginning to develop in main activity patterns.

2.1 Activity pattern

The main change in the last two years is the rising proportion of graduates in employment. By May 1997, 86 per cent of the total sample of graduates were in employment, an increase from 78 per cent since July 1995. Twelve per cent were in further study, compared with 15 per cent two years previously.[1] The percentage unemployed was only four per cent, which is slightly down on the five per cent recorded two years ago.

Most of those in work two years ago were still in work (90 per cent). The main change was for those in further study in 1995: 61

[1] Although graduates were asked for their main activity by ticking just one box, a small number (four per cent) ticked both employment and further study, *ie* equally doing both. This four per cent has been added to the 82 per cent who were mainly in employment (making a total of 86 per cent) and to the eight per cent who were mainly in the further study (making a total of 12 per cent) so percentages add to more than 100.

Table 2.1: Main activity at May 1997 compared with July 1995 for each cohort (percentages)

	May 97			July 95		
	1991	1992	1993	1991	1992	1993
In work	86	85	85	79	76	77
Further study	13	12	12	13	21	13
Unemployed	3	5	4	4	3	8
Other	2	2	4	6	3	3
Number of respondents	*272*	*130*	*183*	*272*	*129*	*180*

Source: IES Survey, 1997

per cent of them were now in work and only 37 per cent were still studying, mainly doing doctorates. Of the total who were in further study in 1995, eight per cent were unemployed at May 1997, but this rose to 13 per cent for those who were in doctoral study at that time.

Among the small group of unemployed graduates two years ago, two out of three were now in work. One in eight were still unemployed but this represents only one per cent of the total sample. It suggests that there is only a very small core of graduates with a persistent unemployment problem.

As Table 2.1 shows, differences between cohort years in activity pattern were minimal by 1997. This is in contrast to the situation two years previously where there was rather more variation between cohorts, especially in relation to levels of unemployment and further study. There is a degree of convergence becoming more apparent by this stage, with employment now more dominant for all years. The proportion unemployed or in further study had changed little for the 1991 graduates. For the 1992 graduates, the proportion in further study (which was much higher for 1992 graduates than others in the earlier survey) has fallen by almost a half to be on a par with the other years. The most noticeable change for 1993 graduates is the drop in unemployment.

2.1.1 Variation by degree discipline

Table 2.2 shows how the subject of first degree continues to be a differentiating factor on activity patterns. Those who had taken first degrees in physical sciences, especially biological sciences, were less likely to be in employment and more likely to be in further study than arts and humanities graduates. Indeed, over one in four of the first degree graduates from biological sciences were in further study in May 1997, that is some four to six years later. While this proportion has reduced over the last two years (in July 1995, 22 per cent of physical science graduates were in further study, compared to 16 per cent in 1997) it mainly reflects the greater likelihood of science graduates to be in PhD study

Table 2.2: Main activity by discipline of first degree

	Biol Science	Physical Science	Math. Science	Eng/ Tech	Social Sciences	Arts/ Humanities
In work	77	81	86	97	89	84
Further study	29	16	10	–	9	10
Unemployed	3	6	4	3	3	4
Other	1	–	1	3	3	6
N	*69*	*73*	*92*	*31*	*183*	*137*

Source: IES Survey, 1997

(see paragraph 2.3). Another point of interest is the high percentage of engineering graduates in employment (97 per cent, but sample numbers are small so need for caution). Unemployment is generally low across all disciplines, though slightly higher for physical science graduates than others.

2.1.2 Variation by gender, age or class of degree

Differences between men and women in their main activity, highlighted in the first survey (in 1995 more women than men were taking further study and fewer were unemployed; see Appendix 1) had almost disappeared by the second survey. So too had differences by class of degree. Mature graduates (*ie* 21 years or over on entry to first degree) however, were still less likely to be in work than younger ones (80 compared to 87 per cent). While both groups had similar unemployment rates, mature graduates were more likely to be economically active (ten per cent).

2.2 Postgraduate qualifications

Almost half of the graduates, 44 per cent, had gained post-graduate qualifications by this time. This compares with the much smaller proportion who went on to further study directly after their first degree (see Appendix 1). It shows the extent to which gaining postgraduate qualifications is part of many graduates' early careers and also how many are choosing to take a gap between first degree and postgraduate study.

Professional postgraduate qualifications (*eg* in law, social work, teaching, banking) had been gained by 44 per cent of them, and Masters degrees by 42 per cent. A small number, 11 per cent, had obtained their PhDs by this time.

Taking postgraduate study in the past seems to have little effect on current activity overall. The activity profile for those with postgraduate qualifications was very similar to the sample as a whole — 85 per cent were in work, ten per cent were in further study and four per cent unemployed.

2.3 Location

In May 1997, nearly one-quarter of the graduates (23 per cent) were still living in Sussex and a further 55 per cent in the rest of the South of England. This is only slightly down on the previous survey findings, where 25 per cent were living in Sussex and 51 per cent in the rest of the South of England in 1995. This shows that geographical mobility is relatively low and that the local area retains a high proportion of Sussex graduates for some years after graduation, although there seems to be a gradual drift away from the Sussex counties over time as careers develop — 28 per cent of the 1993 cohort compared with 19 per cent of the 1991 cohort were still living in Sussex. However, the fact that one in five graduates are still living in the local area six years after they graduated is an important finding, especially as a much smaller proportion, 11 per cent, originated from the local area (*ie* were living there prior to taking their first degree, see earlier report).

Half of the mature graduates were living in Sussex. Science graduates were less likely to have stayed in Sussex than arts/humanities graduates (19 per cent compared with 25 per cent) but this is associated with the older age profile of the latter.

2.4 Further study

As shown above, 12 per cent of the sample were in further study. Two out of three were in full-time study. Most of the remainder were studying part-time while in a job.

The most common qualification being aimed at was a PhD or DPhil (61 per cent of all in further study, and 70 per cent of full-time students). Next came Masters degrees (16 per cent) followed by a range of other qualifications, each representing under five per cent (*eg* PGCE, law postgraduate diploma, another first degree).

Three out of five were studying science. Biological sciences was the most popular subject (23 per cent), followed by physical sciences and social sciences (both 12 per cent), and mathematical sciences and medical subjects (both ten per cent). However, among physical sciences graduates in further study, four out of five were doing PhDs, while among biological science graduates, there was a wider spread of qualifications, *eg* PhDs (50 per cent), Masters (15 per cent) and other postgraduate diplomas (ten per cent). Looking at the data the other way round, 60 per cent of PhD students were in science, including 18 per cent in biological sciences, 14 per cent psychology, nine per cent maths/computer science and 12 per cent social sciences.

Male students were more likely to doing PhDs than female students (79 compared to 51 per cent), while female students

were more likely to be doing PGCEs or other postgraduate diplomas.

2.5 Unemployed

A very small number of graduates were unemployed, just 21 in the sample, or four per cent. Most (16) had been unemployed for under one year, only two for more than three years. As shown above, a few of the unemployed graduates had also been unemployed two years ago. A number of them were undertaking further study two years ago — one in five of the unemployed graduates at May 1997 were doing PhDs at the time of the last survey. It shows the difficulties that graduates who delay their entry to the labour market may experience some years after graduation, and also the that the transition from PhD study into employment can be a difficult one for some.

Almost half of the unemployed graduates were living in Sussex and three-quarters in the South of England.

They were seeking a range of jobs, with no one job group predominating. A number of difficulties in finding a suitable job were mentioned, the main ones being: a perceived lack of suitable jobs (five), lack of relevant experience (five) and high level of competition (four).

3. What Kind of Job?

In this chapter and the next one, the focus is on the current employment of the graduates. Here, we analyse aspects of their job relating to occupation, salary, sector and size of employer, and type of contract, and also any change to their job in the last two years. In the next chapter, we discuss more qualitative aspects relating to their own assessment of their jobs in relation to their degree qualifications, the extent to which they felt underemployed and satisfaction with career development to date.

The key points are:

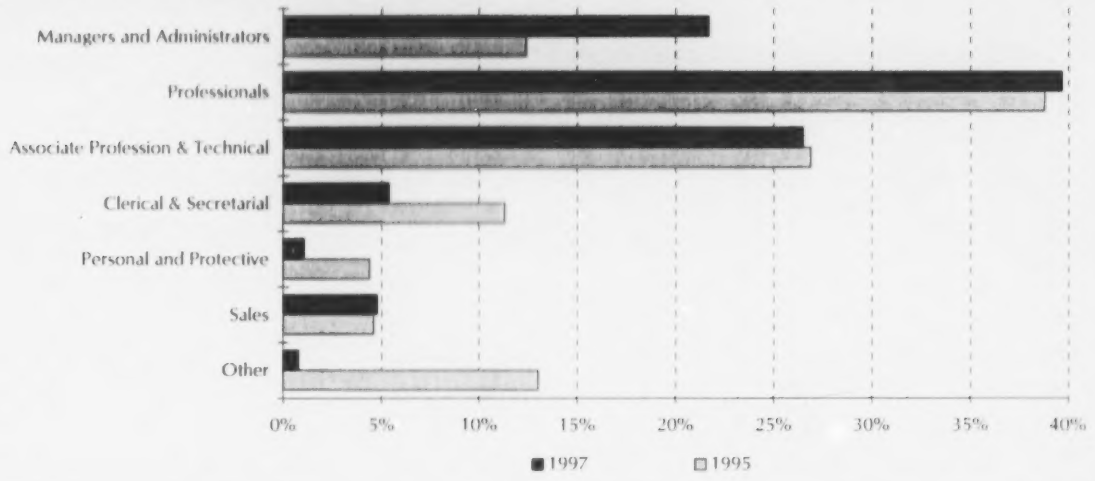
- a general shift upwards in level of occupation since 1995
- in particular, more graduates have moved into management and high level administrative posts
- little change in the level of self-employment
- most in permanent jobs
- a marked improvement in salaries
- increased importance of arts/media and R&D as employment sectors
- job mobility is relatively high but mobility between employing organisations much lower.

3.1 Occupation

The vast majority (88 per cent) of the graduates currently in employment were in occupations in the top three SOC[1] categories. This is an increase on the situation in the 1995 survey, where the equivalent figure was 78 per cent. As Figure 3.1 shows, the main growth has been in SOC Group 1, managerial and administrative posts, which has increased from 13 to 21 per cent. By contrast, the main fall has occurred in the clerical/secretarial group (down from 12 to five per cent).

[1] Standard Occupational Classification.

Figure 3.1: Occupations of graduates



Source: IES Survey, 1997

The upward shift in level of job was evident for all three yearly cohorts (see Table 3.1). However, the 1993 cohort were less concentrated in the top three SOC Groups (only 76 per cent of the 1993 employed graduates, compared to over 90 per cent of those from 1991 and 1992). This is likely to be a combination of the trend over time towards greater breadth and variety of graduate jobs (seen in the earlier survey) and also a moving up the job levels as time passes for each cohort.

We can try to isolate the former by comparing jobs of the 1993 and 1991 cohorts at around the same point in time, approximately three to four years after graduation. This can be done by using the 1997 survey data for the 1993 cohort, and the 1995 survey data for the 1991 cohort, as shown in Table 3.2.

While there are some similarities in their occupational profile, that of the 1993 cohort is slightly broader. The main difference relates to the sales job category which accounts for 11 per cent of

Table 3.1: Occupation (SOC group) at May 1997 for each cohort (per cent)

Occupation	1991	1992	1993
Manager/administrator	23	23	18
Professional	41	42	36
Associated professionals	29	28	23
Clerical/secretarial	3	6	9
Sales	2	1	11
Other	2	1	3
Number of respondents (N)	*214*	*105*	*142*

* includes craft, personal and protective, and unskilled jobs

Source: IES Survey, 1997

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Table 3.2: Occupation (SOC group) at approximately the three year stage for 1991 and 1993 graduates (per cent)

	1991 (at Feb 1995)	1993 (at May 1997)
Manager/administrator	14	18
Professional	45	36
Associated professional	25	23
Clerical/secretarial	8	9
Sales	3	11
Other	5	3
N =	*425*	*142*

Source: 1995 and 1997 Surveys

1993 employed graduates, compared with just three per cent from 1991 at the three to four year stage. This is likely to be associated with the growth nationally of graduate recruitment into sales and marketing functions in the 1990s (see for example the latest CSU publication *Graduate Market Trends* which reported an increased preference by employers for graduates in selling, buying and retailing occupations).

The occupational differences relating to subject of degree, highlighted in the first survey, are still visible two years later (see Table 3.3). Physical science graduates had the lowest proportion in the top three SOC groups and a much higher than average proportion in clerical/secretarial work (around one in eight). Humanities graduates were more likely to be in the top occupational group (30 per cent); while mathematical and biological science and engineering graduates were more likely than others to be in sales jobs (eight per cent).

Male and female graduates had very similar occupation profiles, unlike in the previous surveys where the proportion of women in lower level occupations was greater than for men. Class of degree appeared to be a more important factor than gender, as

Table 3.3: Occupation (SOC Group) by subject of first degree (per cent)

	Biol Sciences	Physical Sciences	Math Sciences	Eng. /Tech.	Social sciences	Humanities /arts
Manager/administrator	14	18	12	27	24	30
Professional	43	39	47	53	41	36
Associated professional	33	20	24	13	27	31
Clerical/ secretarial	–	13	4	–	5	7
Sales	8	5	8	7	2	4
Other	2	5	4	–	1	1
N =	*51*	*56*	*74*	*30*	*154*	*96*

Source: IES Survey, 1997

graduates with firsts or upper seconds were much more likely to be in professional occupations (47 per cent) but less likely to be in sales jobs (three per cent) than graduates with lower degree classes (where the equivalent percentages were 31 and eight per cent).

Within the SOC 1-3 groups, the main jobs were:

SOC1 (Managers and administrative):

specialist managers of various kinds *eg* financial manager, transport manager, production manager (15 per cent)

SOC2 (Professional):

teachers (15 per cent)

engineers and technologists (eight per cent)

natural scientists (four per cent)

lawyers (four per cent)

business/financial specialists (five per cent)

SOC3 (Associate professional and technical)

computer analysts/programmers (four per cent)

nurses and other health occupations (three per cent)

journalists/artists/publishing assistants (five per cent)

social/welfare workers of various kinds (four per cent)

3.2 Salary

Salaries had also improved markedly since the last survey. Over one-third of the graduates were earning £20,000 or over per annum and only five per cent under £10,000. This compares with only seven per cent in the £20,000 plus bracket in 1995. Among the most recent cohort, the 1993 graduates, 29 per cent were in the £20,000 plus salary range while this applied to 43 per cent of the older, 1991 cohort (Table 3.4). The engineering and mathematical science graduates were the highest earners on average, with 57 and 64 per cent respectively in the £20,000 plus bracket. Men also tended to earn slightly more than women, which is related to their subject distribution, but class of degree seemed to make little difference to salaries being achieved, nor did qualification level. Graduates with MSc or other professional qualifications had a similar salary profile generally than those with first degrees only, but PhD holders were less likely to be in the £20,000 plus bracket. This reflects their shorter time in the labour market and also the greater likelihood of them being in the comparatively poorly paid HE sector.

In 1995, there was concern that a significant minority of the graduates were on relatively low salaries at that time. The average was £12-14,000 and one in five had an annual salary of

Table 3.4: Salaries of graduates from each cohort year in May 1997, per cent in each salary range

	1991	1992	1993	All
< £10,000	4	3	9	5
£10-15,999	25	30	38	30
£16-19,999	29	25	24	26
£20,000+	43	42	29	38
N =	*214*	*105*	*144*	*463*

Source: IES Survey, 1997

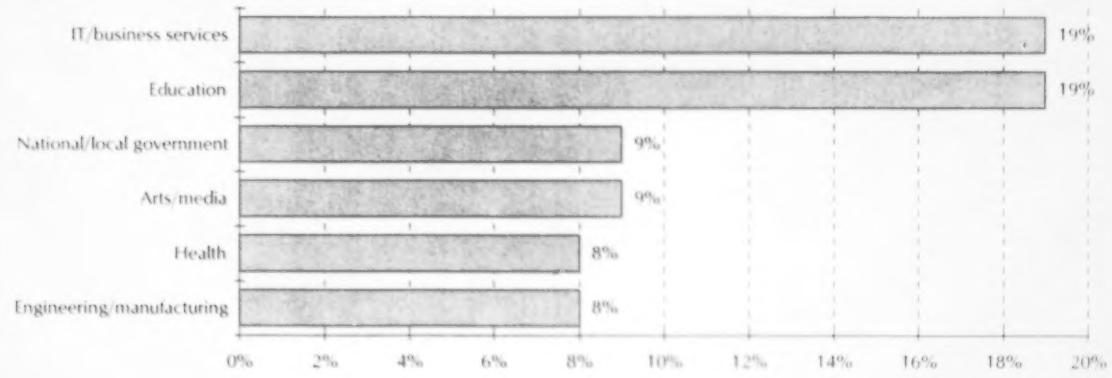
under £10,000 whereas the starting salaries for newly qualified graduates at that time was just over £14,000. By 1997, only 15 per cent of the previous 'low earners' (*ie* under £10,000 in 1995) were still at this level, and a number of them had progressed rapidly (13 per cent were now earning more than £20,000). Of the graduates in the next salary band, £10-16,000 (39 per cent in 1995), only one in four were still in this band by 1997 and 30 per cent of them were earning more than £20,000.

3.3 Sector

A range of employment sectors were represented, as shown in Figure 3.2. Sectors which had grown in relative importance (numerically) over the two years were the arts/media sector and R&D. Both are associated with slow starts to careers, where post-graduate study and/or experience are needed. Degree subject was again still an important factor:

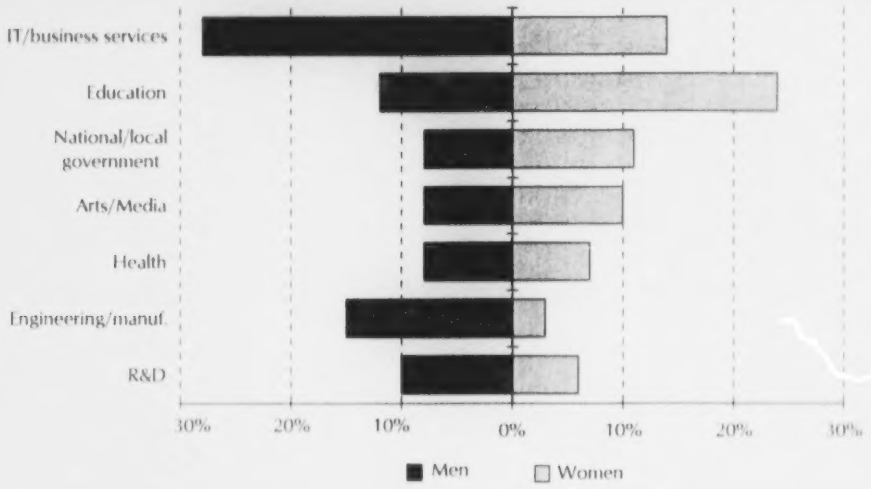
- almost 70 per cent of the engineering graduates were working in the engineering or manufacturing industry
- one-quarter of the biological scientists were in R&D and another quarter in the health sector
- half of the mathematical scientists were in IT/business services

Figure 3.2: Employment sectors of graduates at May 1997



Source: IES Survey, 1997

Figure 3.3: Employment sectors at May 1997, by gender



Source: IES Survey, 1997

- the education sector employed around one-fifth to one-quarter of the scientists and humanities graduates, none of the engineers and just one-sixth of the social scientists.

There was a clear gender split with twice as many women than men working in education, and the reverse situation for IT/ business services. Women were also more likely than men to be working in national or local government and in the arts/media sector (Figure 3.3).

Mature graduates were more likely to be employed in national or local government (23 per cent) and health (20 per cent) and less likely to be in IT/business services (eight per cent) than their younger counterparts.

3.4 Size of company

One in three graduates were working in small to medium sized firms (SMEs) *ie* firms with less than 200 employees, and one in eight in very small firms (less than 20 employees). There seems to have been a slight shift away from small firms between the two surveys (in the 1995 survey, 42 per cent of employed graduates were in SMEs). This may partly be due to sample differences but is more likely to be due to the influx of postgraduates (especially PhDs) into R&D and university employment, which is biased towards larger organisations.

3.5 Job change

Just over one-third of the graduates had been less than one year in their current job, but 40 per cent had been in post for more than two years.

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Of those who had changed jobs in the last two years, 17 per cent had done so for promotion, 15 per cent to improve prospects or career progression and 14 per cent to change career path. Other less career related reasons (*eg* more interesting work, better conditions, contract finished) accounted for between six and ten per cent of the reasons for job moves.

A smaller proportion had changed their employer within the last two years (around 30 per cent). The main reasons given were to improve career prospects (19 per cent) and end of contract (16 per cent).

3.6 Type of contract

The vast majority were working full time (89 per cent). Women were only slightly more likely to be in part-time jobs than men (five per cent compared with three per cent). Mature graduates were more likely to be in part-time employment (13 per cent).

Four out of five had a permanent or continuing contract. Of the remainder with fixed term contracts, they were split equally between those on short (under 12 months) and longer contracts. Temporary working has reduced over the two years, from one in three in the 1995 survey on fixed term contracts.

Self-employment still accounted for a relatively small proportion, only seven per cent overall. This compares with six per cent in 1995. There was little difference in the level of self-employment between cohorts. It was more common for arts than science graduates, especially arts/humanities graduates (16 per cent), and for mature graduates (16 per cent), but there was little difference between men and women. Interestingly, it was also more likely among graduates with firsts or upper second class of degrees (ten per cent).

The self-employed were distributed across a range of sectors and occupational areas. A dominant group, accounting for one of four, were those in literary, artistic or sports occupations.

Most had been self-employed for a relatively short time, usually less than a year.

4. What do They Think of Their Jobs and Career Development?

In this chapter we discuss more qualitative aspects of jobs and careers to date. In the survey, graduates were asked questions about:

- the relevance to their job of having a degree
- the extent to which they felt underemployed
- and also the extent to which they were satisfied with their career to date.

The key points are:

- most are now in 'graduate level' jobs
- there is an increasing trend towards 'graduate level' employment as time passes
- underemployment has fallen but still affects half of the graduates
- underemployment is being felt much more by those in lower in lower level jobs
- there are high levels of satisfaction with overall career development to date
- satisfaction with career development correlates strongly with job level.

4.1 Background

A particular feature of the graduate labour market in recent years has been the 'qualitative' mismatch between supply and demand, more specifically the extent to which the jobs graduates do are commensurate with their qualifications and abilities. Although national trends show unemployment among graduates falling and vacancies rising, there are concerns about graduate utilisation. The broadening of the graduate job market at a time of economic recession and increased graduate supply has been associated with increased substitution of graduates for non-graduates. There is more blurring of the distinction between a 'graduate job' and other jobs. The 1995 survey of Sussex graduates showed that the majority (65 percent) of the 1993

graduates considered themselves to be underemployed, 52 per cent were in jobs for which a degree was not a formal entry qualification and 49 per cent did not claim to be doing work that required graduate ability. Other research also confirms that underemployment (or over-education) is a significant issue (see for example the analysis of the Labour Force Survey where around one-third of graduates appear to be in jobs at a lower level than their qualification requires, Alpen *et al.*, 1997; and research by Mason, 1996 where underemployment was widespread for graduates recruited to the financial sector).

There are two key questions which research to date has not addressed adequately:

1. Is underemployment an increasing trend in the 1990s?
2. And is it an issue associated more with initial jobs and early careers?

The second Sussex follow-up attempted to shed further light on issues of under-utilisation, in particular the second question.

4.2 Relevance of a degree

Graduates in jobs were asked, in the same way as in the first survey, to consider a number of statements about their jobs and the need to have a degree. The results of the 1997 survey showed that, overall:

- 67 per cent said that a degree was helpful in getting the job
- 62 per cent said the work they do requires graduate ability
- 43 per cent said the previous job holder was a graduate
- 54 per cent said that a degree was a formal entry requirement
- 11 per cent said that entry was via a graduate training scheme.

These percentages are based on the total (463 graduates) currently in jobs. Not all graduates answered yes or no for all statements, but a total of 91 per cent agreed with at least one of the above statements. This can be interpreted as meaning that they felt broadly in 'graduate level employment'. Of most relevance still seems to be that a degree was helpful in getting a job or the work required graduate ability (each supported by over 60 per cent).

The overall figure of 91 per cent in 'gradate level employment' is higher than the 61 per cent whose jobs were classified in SOC 1 or 2 (*ie* at professional or managerial level) but is similar to the 88 per cent in SOC 1 to 3 (*ie* the above, plus associate professional) (see Chapter 3).

Slightly fewer of the 1993 graduates considered that their job was at 'graduate level' (85 per cent) than 1991 or 1992 graduates (93 and 96 per cent). By degree discipline, a lower proportion of

humanities and arts graduates did so (only 76 per cent) but the proportions were similar among graduates from other degree disciplines. There was little difference by gender but mature graduates were less likely to be in 'graduate level' employment. It is likely that these variations relate closely to the differences highlighted earlier in section 3.1 on level of job for different kinds of graduates.

Comparisons with the 1995 survey, where 80 per cent overall felt that they were in 'graduate level' employment; (*ie* agreed with at least one of the statements), suggests that views about the relevance of degree study have become more positive. This undoubtedly is associated with the shift upwards in job level between the two surveys, with a higher proportion of graduates in professional and, especially, managerial/administrative jobs by 1997 (see Figure 3.1). However, responses to the individual statements about their job, shown in Table 4.1, highlight some interesting variations. While fewer graduates in 1997 than in 1995 considered their degree to be helpful in getting their job, a significantly increased proportion considered their work required graduate ability. This might be expected, as other attributes such as experience and particular skills become more relevant than qualifications as time passes. It is noticeable also that the percentage who knew the previous occupant was a graduate had increased considerably in the two years between the surveys. One possible explanation is that, having been with their employer for longer, they are now more knowledgeable about their employing organisation (*nb*: 30 per cent had not changed employers in last two years), another is as they move up the organisation into managerial and professional jobs, they are more likely to be filling a job previously held by a graduate.

In making these comparisons with the previous survey, it needs to be noted that some of the differences over time are likely to be caused by changes taking place in the way graduates view their jobs and positions in the workplace. In particular, their level of awareness, for example of utilisation issues and the value of a degree, may have increased rather than the needs of the job changed. This cannot be tested from the survey data but needs to be borne in mind when doing follow-up work of this kind.

Table 4.1: What is a graduate job? Percentage of graduates in both surveys agreeing with the different statements

	1997 Survey	1995 Survey
A degree was helpful in getting job	67	75
The work requires graduate ability	62	43
The previous job holder was a graduate	43	15
A degree was formal entry requirement	54	46
Entry was via a graduate trainee scheme	11	11

Source: 1995 and 1997 Surveys

4.3 Job changers

It was shown in the previous chapter that 60 per cent had changed jobs in the last two years. Looking separately at the views of job changers and non-changers about their jobs produced surprisingly little difference: the percentages agreeing with each of the statements about relevance of degree were similar.

4.4 Upgrading of jobs

An additional question was included in the second survey to allow for any job upgrading that had taken place while the graduates were in post. Those in jobs where a degree was seen by them *not* to be a formal entry requirement (183) were asked if their job had changed so that it now required graduate ability. One in four of them agreed that it had (*ie* it had been upgraded). This illustrates the dynamic nature of jobs and the difficulties in defining level of job by using entry criteria alone. This group of graduates who had experienced a job upgrading were more likely to be employed in the IT/business and health sectors and to be in managerial jobs.

4.5 Underemployment

At a later point in the 1997 questionnaire, the graduates were asked whether or not they considered themselves to be underemployed at present. Overall, almost half of those currently in jobs felt they were underemployed, including 12 per cent who felt very underemployed.

Again, subject differences were evident. In May 1997 physical science graduates were most likely to feel very underemployed and engineering and mathematical science graduates least likely (Table 4.2). Men were slightly more likely to feel very underemployed than women in jobs (14 per cent compared with ten per cent) especially male arts/humanities graduates, as were those with lower classes of degrees (13 per cent of lower seconds/thirds compared with ten per cent of firsts/upper seconds).

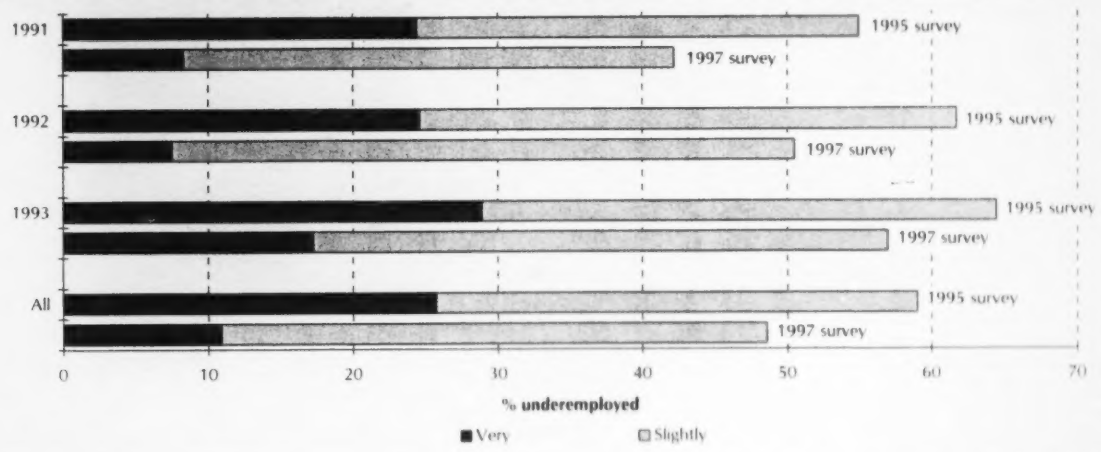
However, compared with the findings of the previous survey (Figure 4.1), the level of underemployment has fallen: in 1995, 60 per cent of the graduates said they were underemployed in their

Table 4.2: Underemployment by subject of degree. Percentage of graduates in jobs

	Biol Sciences	Physical Sciences	Math. Sciences	Eng./ Tech.	Social Sciences	Hum./ arts	All
Very underemployed	11	20	4	–	10	19	12
Slightly underemployed	38	41	43	27	35	35	37
Not at all	50	39	53	73	55	46	51

Source: IES Survey, 1997

Figure 4.1: Underemployment : views of each cohort



Source: IES Survey 1995 and 1997

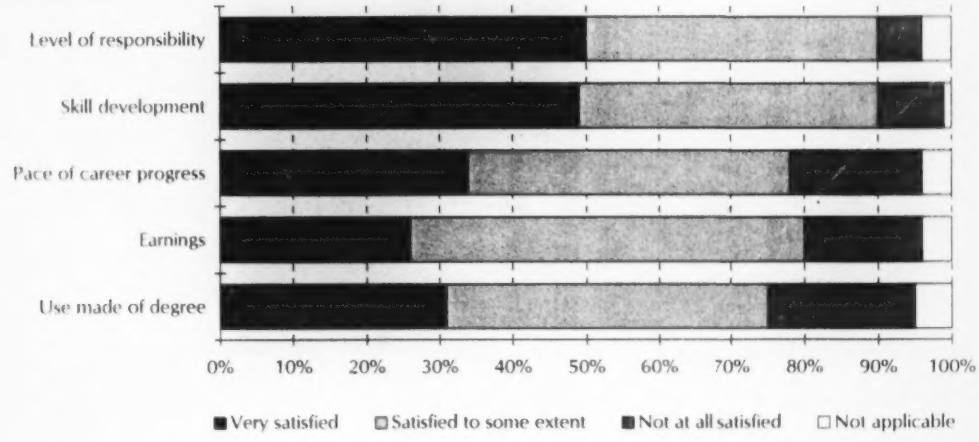
jobs, including 26 per cent who were very underemployed. Nevertheless, one in three graduates who said they were underemployed in 1995 were still feeling underemployed by 1997, although only six per cent felt very underemployed at both times.

4.6 Career satisfaction

Graduates were asked how satisfied they were with their career development to date in terms of various aspects of it. These are shown in Figure 4.2. They were also asked about their overall career development.

On all aspects, there was a high degree of satisfaction expressed — over 70 per cent were satisfied to some extent. Aspects relating to level of responsibility and skill development received the most support, with almost half feeling very satisfied.

Figure 4.2: Satisfaction with aspects of career development



Source: IES Survey, 1997

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When asked about overall career development to date, most were satisfied, and 39 per cent were very satisfied. This is slightly up on comparable figures in 1995, where 75 per cent were generally satisfied and 25 per cent were satisfied to a considerable extent (*nb*: wording of the questions was slightly different in the earlier survey). It also suggests that the under-employment issue discussed above may not be viewed as particularly significant in career terms for many graduates.

This is in line with the findings on the medium term employment outcomes shown in other chapters. After a difficult and slow start for some, most graduates' careers were now more stable and characterised by high employment levels, lower than average unemployment, and relatively high earnings. Furthermore, a clear positive association emerged between length of time in the labour market after graduation and satisfaction with different career aspects. Respondents from earlier cohorts consistently reported considerably higher satisfaction levels than their peers who graduated later, as shown in Table 4.3.

Apart from the positive association between year of graduation and career satisfaction, persistent variations among other sub-groups also emerged, in particular:

- mature graduates were the least satisfied. Around one-quarter were not at all satisfied with all the different aspects of their job and career so far
- those with a degree in pure sciences, art and humanities also consistently reported lower satisfaction levels. In particular, around one-fifth of these graduates were not at all satisfied with the pace of their progress, as well as their overall career development, the opportunity they have had to use their degree, and their earnings.
- graduates with a lower class of degree (*ie* lower second or third) were generally less satisfied than their peers with some aspects of their career. As well as overall career development, they included the pace of progress so far and the use made of the degree.

Table 4.3: Career satisfaction: extent to which graduates from each cohort are satisfied with aspects of their career development (per cent)

	1991	1992	1993	All
Salary/earnings	82	84	74	80
Responsibility	93	87	86	89
Career progression	81	80	71	78
Use of degree	80	76	66	74
Development of skills	91	93	87	90
Overall career development	88	89	80	86

Source: IES Survey 1997

- but there was little difference by gender in levels of satisfaction.

As expected, employment circumstances at the time of the survey were strongly associated with satisfaction levels, so it was not surprising to find that those in employment or further studies were much more satisfied with every aspect of their career than those who were out of work. Similarly, graduates in professional, managerial and administrative, and associated professional jobs were also much more satisfied than their colleagues in lower level positions (*eg* sales, clerical, secretarial jobs). Dissatisfaction levels among the latter were as high as 50 per cent with most career and job aspects.

Finally, there was a strong positive association between earnings and level of satisfaction. This could be a spurious association reflecting the higher satisfaction levels among earlier graduates and those in higher level jobs, who were also likely to have a higher salary. However, the opposite could also be true; that is, these graduates were more satisfied because they had high earnings. The level of satisfaction with one's job and career is determined by a complex interplay of factors. It is not always possible to determine the relative importance of each influence and the level of interdependence between different explanatory variables.

5. Career Paths

This final chapter focuses on career paths, and in particular the extent to which the variety of career paths being followed and the early career turbulence seen clearly in the 1995 survey, has continued.

The key points are:

- initial 'turbulence' subsiding and more settling down in careers
- career patterns becoming less varied and more stable over time, especially from about three to four years onwards
- a continuing commitment by graduates to further study
- initial 'bad starts' (such as that experienced by 1992 graduates) appear not to have a lasting effect on careers
- continuing evidence of different career patterns between men and women, and between mature graduates and their younger peers.

5.1 The survey data

In both the 1995 and 1997 surveys, respondents were asked to provide information about their main activity at six monthly intervals since graduation. For purposes of career path analysis, this was classified as being in one of three career 'states'.[1]

- **in work:** *ie* in a full or part-time, permanent or temporary job, including employer graduate training scheme or self-employment
- **further study:** *ie* undertaking a full- or part-time course or PhD research
- **unemployed:** *ie* not working but seeking employment.

The two data sets taken together provide a complete set of information on the labour market activity patterns, and in particular career state changes, of graduates over a period of six years for 1991 graduates; five years for the 1992 cohort; and four

[1] Although the graduates were asked to indicate their main activity, *ie* only one of the above, a few gave both work and further study. For this career analysis, these have been coded as 'in work'.

years for those who completed their course in 1993. It must be emphasised that the data provide a snapshot of what respondents were doing at six monthly intervals. They do not provide any information on what graduates were doing in the periods between these stages.

In this chapter we first analyse respondents' employment status at different stages in their post-graduation careers for the sample as a whole and for different sub-groups of graduates. We then explore the most common career profiles emerging and illustrate how some have reached their current positions often from fairly slow or difficult starts.

5.2 Six year career span: the overall picture

The data in Figure 5.1 extend and update the earlier survey analysis. They present a picture of a steadily increasing proportion of graduates in employment, and a corresponding decrease in those unemployed or in further study (as their main activity). The main points to note relating to each 'state' are:

- **Employment**: the figure of around 80 per cent in employment at the four year stage seems to remain stable in the longer term.
- **Further study:** After the initial peak, when nearly a fifth of graduates were in further study as their main activity, this proportion declined steadily until the fourth year when it stabilised. It has then remained at about nine to ten per cent, indicating a continuing level of commitment to continuous learning of a substantial nature.
- **Unemployment:** the high initial unemployment declined rapidly in the first three years and has reached a steady state

Figure 5.1: Labour market activity for the entire sample at six monthly intervals since graduation

Notes: * *1991 and 1992 cohorts only;* ** *1991 cohort only (see note 1 below)*

Source: IES/CDU Surveys, 1995 and 1997

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level of about three to four per cent. This is considerably lower than the average for the UK workforce as a whole.

5.3 Six year career span: cohort variations

The analysis of changes in the labour market position of respondents from different cohorts shows some interesting differences among graduates who completed their degree at different times. Different economic and labour market conditions at the time of graduating, and subsequently when making moves between jobs, have a major affect. This is seen for example in the better position for 1993 graduates after four years than the earlier cohorts (85 per cent of the former in jobs compared with 82 and 79 per cent of the latter after four years, undoubtedly due to the better job prospects since 1995, as the economic recovery got under way). It is also seen in the higher initial unemployment levels of 1992 graduates who were particularly badly hit by the recession (see earlier survey report for more discussion). This 'difficult start' however, does not seem to have had a lasting effect. Four years after graduation, unemployment among the different cohorts was very similar (*ie* three to four per cent). For detailed figures see Tables A4.1 — A4.3 in Appendix 4.

5.4 Six year career span: group variations

The 1995 Sussex survey, as well as earlier graduate follow-up studies (*eg* Brennan *et al.*, 1992; Levey and Mackenzie, 1996) have shown that personal characteristics — gender, age, degree discipline and degree class — can have a considerable influence on progress in the labour market. In this section, variations between different groups of graduates are explored.

5.4.1 Gender

Women's more successful market position, shown in the initial post-graduation period (see HESA, 1996 and the earlier Sussex survey) is maintained throughout most of the period covered by the two surveys, with men more likely than women to be unemployed at most career stages. However, the gap between the position of women and men varied considerably at different points in time, reflecting different career path choices (*eg* more taking postgraduate study initially, fewer on longer PhD programmes (see Table A 4.4 in Appendix 4).

5.4.2 Age

Mature graduates are known to face greater labour market disadvantage due to a combination of factors (*eg* because of their 'unconventional' background, their restricted geographical mobility, family responsibilities, employers' negative perceptions, *etc*). This has emerged from the previous Sussex survey, as well

as other studies on graduates' initial employment outcomes and careers. It was confirmed as a continuing trend by the current research. Three and a half years on there was still a considerable gap between older and younger graduates, with 76 of young compared with 83 per cent of mature graduates found to be in work. At most stages, mature graduates were less likely to be employed than younger ones though differences between the two groups varied over time (see Table A4.5).

On the whole, young graduates were more likely than their older counterparts to be in further study at all post-graduation career stages, except two and two and a half years after graduation, when the same proportion from both groups mentioned this as their main activity. There was also a different trend pattern: mature graduates showed a sharp decline in participation in further study at the three to three and a half stage (dropped from 14 to six per cent) and then stabilised, but participation by younger graduates declined more steadily over the whole period. (see Table A4.5).

5.4.3 Degree subject

At most career stages the highest employment levels were found among applied sciences graduates. This advantage was obvious right from the beginning and continued to the four year stage. After then, the picture becomes less clear, with applied sciences respondents maintaining high, but not always the highest, employment levels (see Table A4.6).

In the initial post-graduation period, the proportions of unemployed graduates from different subject areas were very similar (between 15 and 16 per cent), even for those with applied science degrees who had been much more successful in securing employment soon after graduation. There is then a sharp drop in the following six months among all groups, but especially among pure and applied scientists. By six years after graduation, unemployment levels were very similar for graduates from different disciplines (*ie* between two and four per cent).

At all stages the proportion of pure scientists in further studies was considerably higher than for other graduates, and largely explains the lower than average employment levels among this group. Four years after completing their degree course, 20 per cent of pure scientists mentioned further studies as their main activity, probably including many that were undertaking PhDs (see Chapter 2). By this stage the corresponding figure for the graduates from other disciplines was between seven and nine per cent. Six years after graduation, 18 per cent of pure scientists were still reporting further studies as their main activity.

5.4.4 Degree class

In a competitive graduate labour market, class of degree is used by some of the large graduate recruiters as an important selection criterion. It is also used for entry to postgraduate study. The findings from the 1997 survey show, however, that a better degree class does not lead to higher employment levels nor, on the whole, to lower unemployment over the medium term. The main difference between the graduates with firsts or upper seconds and the rest is the likelihood of being found in further study. At every post-graduation career stage, graduates with a first or upper second were considerably more likely than other respondents to mention further study as their main activity. The largest gap between the two groups was between two and three years after graduation, with almost twice as many with firsts or upper seconds in further study than others. The gap between the two groups is smaller in the initial post-graduation period and then again in the later years.

5.5 Career paths

The issue of career changeability or career 'turbulence' was explored in the 1995 survey and the findings showed the varied and fragmented nature of many graduates' early career paths. There are several explanations for this:

- poor economic conditions for those graduating in 1991 to 1993, with the recession only just beginning to ease for the 1993 cohort
- the non-vocational nature of many of Sussex degree courses — graduates then use their early years to accumulate experience and qualifications before starting 'career' type jobs
- the popularity of taking time out and having a complete break before starting work, often to travel or to try out something different before starting a 'proper job' or 'career'.

Two years later in the 1997 survey, the diversity is still visible but there is reduced movement between activities. This can be seen best in the analysis of the career paths of graduates who completed their degree in 1991, that is those with the longest career span of six years.

As in the earlier survey, the analysis focused on changes between career states, *ie* between being in work, further study and unemployment. This identified 140 different career paths or career profiles for the 272 graduates (in the 1991 cohort). To facilitate the analysis these were condensed to reflect the order of graduates' career states (employed, further studies, unemployed), but not the length of time spent in each state. This resulted in 32 career profiles. The most common ones are listed in Table 5.1.

Table 5.1: Most common career paths — 1991 graduates (per cent)

Career path	%
In employment at each stage	25
Further studies and then employment	10
Employment, further studies and then employment	8
Employment, unemployment and then employment	8
Unemployment and then employment	6
Further studies, unemployment and then employment	5

Source: IES/CDU Survey, 1997

The largest proportion of respondents were those who had been in employment at each career stage (*ie* 'continuous' employment), but they represented only one-quarter of the sample. 'Further study and then employment' was the second most common career pattern, accounting for ten per cent of graduates.

The most common career paths emerging from the early and latter part of respondents' careers were also compared (*ie* the first two years after graduation and the last two and half years). This showed that the early complex career pattern identified in the first survey was becoming more simplified, with evidence of a settling down taking place. In particular:

- there is now a higher level of stability among 1991 graduates compared with their early experiences. The analysis of the initial post-graduation period resulted in 75 different career paths compared with 37 in the last two and a half years.
- the most common career path emerging from the analysis of both periods was 'continuous' employment at every point in time. However, while 34 per cent of respondents were found in this category in the early years, the corresponding figure was double (68 per cent) for the past two and half years.

5.6 Career profiles

It is interesting to add 'flesh' to this statistical analysis by looking at examples of individual career profiles. We have identified from the responses made by individuals to particular questions, and their additional comments given, a number of different types of career profiles. The following give a flavour of the diversity in career paths and also shows how some people succeed in the medium term from slow or fairly inauspicious starts.

45

Type 1: Graduates who switch careers by retraining (*eg* radiography, veterinary science, occupational therapy), such as:

Jan who took a Biology degree with European Studies, achieving an upper second. After graduating she worked voluntarily as a carer in a children's home in Jamaica for a year. The experience helped her to decide she wanted to work as an occupational therapist. Returning to the UK she found herself unemployed but worked voluntarily in a Occupational Therapy department whilst applying for training courses. She had to take temporary work to save money for her three year degree in Occupational Therapy. She started work five years after graduation as an Occupational Therapist for a Priority Care NHS Trust in Sussex. Jan feels very satisfied with the pace of career progress and fairly satisfied with her overall career development.

Type 2: Graduates who take further training but in a similar field (*eg* housing, personnel) such as:

Erica who graduated with an upper second in Politics. She took a year out, working between her second and third year of her degree. On graduating, her first work was short term as a local government administrative assistant. Her frustrations in finding work stemmed from a feeling of being overqualified but needing experience to get into her chosen area – Personnel. At the time of the 1995 survey she was funding herself through Stage 1 of the Institute of Personnel & Development exams. Whilst on the course she met people who recommended her for a personnel job with the NHS, which she applied for and got. Writing about her experiences in the 1995 survey, Erica emphasised: *'I realised it was going to be a long slog to get into Personnel. Although it may seem as if I've made little progress and I'm unhappy in my present job, I'm not as bitter as I sound. I don't think my degree has helped me so far but a lot of the jobs I see advertised and will be applying for in three to five years time stipulate 'graduate calibre'.* Two years on, Erica has passed her personnel qualifications, has moved jobs and is now working as a Personnel Adviser. Erica does not now feel underemployed and is very satisfied with her overall career development.

Type 3: Graduates who, with difficulty, get into their ideal job and then find it does not meet their expectations, such as:

Sanjit who graduated with a 2:2 Electrical & Mechanical engineering degree. Initially unemployed, Sanjit's ideal area of work was stockbroking. However, without relevant experience he found it difficult to sound convincing on application forms. *'Having a 2:2 also made it difficult. City firms tended to go for first or 2:1 candidates.'* Sanjit took a short-term job with the Civil Service before getting a job in the City as a Convertible Bond Salesman. A day work-shadowing a trader helped him gain an insight into the business. Sanjit started work on a graduate training programme. During the first year of permanent work, he *'did not get enough exposure to clients'*. However, the situation improved and Sanjit was still in the same job after three years. By the time of the 1997 however, he had taken a different career path, changing jobs to work in business information for a specialist agency. He had become bored and frustrated with his work as a stockbroker and is now a Customer Support Executive providing after sales support to clients (mainly city institutions). Earning over £20,000 he does not now feel under-employed and is fairly satisfied with his overall career development.

Type 4: Graduates who find their ideal job by accident and discover they have a real flair for it, such as:

Anna who graduated with a 2:1 in Linguistics with French. Initially unemployed, she took a secretarial course for graduates to enhance her employability. Two months after her course she found work with an investment capital company working as a secretary, but quickly moved into marketing. Anna explained in the 1995 survey that: *'Despite 'thinking' about my career before graduating, I had no real idea what I wanted to do. I have been fortunate in getting into a job in an area (ie marketing) that I now realise I have a flair for and an interest in.'* In 1996 Anna moved jobs to further her career and open up new opportunities. She now works for a large consultancy firm as a Marketing Executive earning over £20,000, having successfully passed her professional marketing qualifications.

Type 5: Graduates (often mature) who struggle to balance work and family commitments, such as:

Emma who was a mature student at Sussex with children. She graduated with a 2:2 in Social Policy and Administration. Having a family and needing to work have strongly influenced Emma's career development. Since leaving Sussex she has worked for a legal aid firm as Caseworker/Quality Auditor. She feels slightly underemployed in her work. *'I have not actively pursued career development as not only do I work full time, I also have three children ranging from 14 yrs to 18 months and feel that my family commitments should continue to take precedence over my career until such time as the youngest child is less demanding. I find balancing my home life and work commitments (I am out of the Brighton area two days a week auditing) very tiring and feel I am too old to undertake any further pressures.'*

Type 6: Graduates who change jobs for a better quality of living, such as:

Patrick who graduated with a 2:1 in Economics with French. He spent the next year on a postgraduate diploma at the College of Europe in Belgium. The main reason behind this decision was to *'defer entry into the labour market during the poor economic climate'*. Patrick then went to work for an Economics Consultancy in London for three years. He became disillusioned with this company – *'carrying out economic analysis in a commercial environment lacks depth due to time and money pressures. This is very frustrating, having proved you are capable of a lot more whilst at University, but unfortunately, this is probably true of most jobs outside academia.'* Patrick changed jobs as the focus of his work switched away from economics to more commercial retail work. Feeling very underemployed, Patrick was keen to find a better quality of living outside London. He is now working for a Cambridge consultancy as an Economic Analyst earning over £20,000.

Type 7: Graduates who realise the full benefits of their degree several years into their careers, such as:

Anthony who was unemployed for a year after leaving Sussex with a 2:1 in English Literature. He felt he was hindered in his job search by *'lack of work experience, too many qualifications, lack of confidence and direction'*. The NVQ in Information Technology that Patrick gained through a restart course got him a job as a Software Engineer in a small multimedia company in East Sussex. Writing in 1995 about his experience, Anthony commented: *'Although I felt that my degree course had not provided me with useful skills when I graduated and was unemployed, I now feel that I am using skills I gained in more subtle ways. I had to go back to the start and learn my trade from scratch, mainly by myself, but that was because I didn't work out what I wanted to do until I'd been unemployed for a year.'* Responding to the 1997 survey, Anthony is still in Brighton and still working for the same company. He comments further: *'Although my degree is not strictly relevant to my current employment, it has become increasingly useful as the company has become aware of my skills. Despite the technical nature of my job, I would say that I use my degree in English on a daily basis.'*

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Appendix 1: Summary of 'What do Graduates Really do?'

Graduates now face a less predictable, more rapidly changing and more competitive labour market than their predecessors of even a decade ago. The notion of what constitutes a graduate job has broadened and the assumption that typically graduates go into permanent, professional level employment is less tenable now than it ever was. Finding out what graduates *really* do, and the variety of career paths they follow, can help current and prospective students make informed decisions about career plans and provide beneficial feedback to universities about employer demand and outcomes of degree study.

This report presents the findings of a 1994 follow-up survey of graduates from the University of Sussex in the years 1991 to 1993. It provided a detailed perspective about labour market outcomes over a number of years. Nearly 2,000 first degree graduates were contacted in the survey, and 56 per cent responded by completing a questionnaire about their jobs and career paths. The research was undertaken jointly by the Institute for Employment Studies (IES) and the University of Sussex Career Development Unit (CDU) under the auspices of the IES/UoS Joint Research Fund.

The achieved sample of graduates represented one in three of all first degree home students graduating over the three years, 1991, 1992 and 1993. It broadly reflected the main characteristics of the university's graduate output in these years. It comprised slightly more women than men, and slightly more graduates with BA than BSc degrees.

A1.1 Initial destinations

Six months after graduation, nearly three in five of the graduates were in employment, and a further 24 per cent were taking further study. However, almost one in three of those graduates in employment were in short-term or temporary jobs (lasting less than three months). The average initial unemployment rate over the three years was 15 per cent, but this peaked in 1992 at 18 per cent, mainly due to the more adverse national labour market conditions prevailing at that time.

At this six month stage, women were less likely to be unemployed than men, as were engineering graduates compared with other

science graduates and, in particular, some arts graduates. Graduates with higher degree classes were also more likely to be in jobs.

A1.2 Subsequent progress in the labour market

Success in the labour market improved as time passed. One year after graduation, unemployment rates had dropped for all three years' output, to ten per cent on average. Almost half of the graduates were in permanent jobs and a further 15 per cent were in temporary jobs. 1992 graduates still appeared to be suffering a comparative disadvantage in the labour market compared with other years. Six months later (*ie* 18 months after graduation) the proportion of the total sample in permanent employment had increased to 56 per cent, though the unemployment rate remained at around ten per cent.

Many of the differences between graduates identified at the six month stage diminished over time. Thus, the gap between the unemployment rate of men and women narrowed, as did that between mature and younger graduates and graduates with different classes of degrees. Subject differences still persisted, however, reflecting the different career paths followed in the first 18 months after graduation.

Looking further on, to three years after graduation, 72 per cent of the 1991 cohort were in permanent employment, considerably higher than the 41 per cent recorded at the six month stage. Two out of three of those who had been unemployed initially were in employment three years after they had graduated.

Although the most common career profile was to be in continuous employment over the three years, this applied to only 30 per cent of the 1991 graduate output. A great number of different career profiles, in terms of career states (*ie* in work, out of work, in study) were identified. Those which had experienced a period of temporary employment at some stage tended to have more turbulent career patterns than those that did not. Degree subject was a key variable in analysing career state changeability. Applied science graduates were more likely than other graduates to have less complex career profiles.

A1.3 Temporary working

Most graduates had held at least one job since graduating but for some this had been a temporary or short-term job (lasting less than three months). One in five had gone into a temporary job within the first six months. This proportion was similar for the 1991 and 1993 graduate outputs. Temporary working tended to be restricted to the early stages of career development, and it was relatively uncommon for graduates to take a series of temporary jobs lasting more than 12 months in total duration.

The type of temporary work varied widely, but its focus was below professional level. The majority took temporary work for financial reasons, but some did so to gain work experience.

A1.4 Postgraduate study

A high proportion of the sample, over 60 per cent, had taken further study at some stage, the majority starting it within the first six months of graduation. The highest incidence of further study was among 1992 graduates, reflecting the dual effects of poor graduate employment conditions and the increasing availability of postgraduate places, especially on masters and diploma programmes. Only one in four remained locally within the Sussex counties to take postgraduate study.

A1.5 Current job

The current jobs of the graduates were analysed in detail. Most were full-time rather than part-time or of a variable hours working pattern. Only six per cent were self-employed, but one in three were on fixed term contracts, over half of which were of at least 12 months duration.

A considerable variety of occupations was recorded. While the majority (78 per cent) were in higher skilled occupations (classified as managerial, professional or associate professional/ technical), including nearly 40 per cent in professional occupations, the remainder were in a wide range of lower-skill level jobs, mainly in clerical, sales and personal service occupations. The most significant occupation (numerically) was teaching (13 per cent of the total). Most occupations were occupied by less than five per cent of the sample.

There was evidence of a broadening in the range of jobs recorded over the three years, as well as the appearance of 'new' graduate jobs. Fewer 1993 graduates were in professional occupations, and more were in clerical and secretarial jobs. Fewer female than male graduates were employed in managerial/ professional/ technical level jobs. Engineers and technologists were more concentrated in professional level occupations than graduates from other disciplines. There was also a widening salary range, but on the whole salaries were relatively low. While ten per cent of the 1991 cohort were earning in excess of £20,000 by the end of 1994 (three years after graduation), half were earning under £14,000. The highest salaries recorded in all three years' output were by graduates in mathematical sciences (including IT).

There was a bias towards the services sector, with one in three being employed by a public sector organisation, and one in five by a financial services company. Small firms were well represented: two out of five graduates were employed in firms with under 200 employees, including 15 per cent in firms with

less than 20 employees. One in five graduates were working in the local area (East or West Sussex). This represents a net gain to the locality, as only one in ten of the graduates had been living locally prior to entry to their first degree. More of the 1994 output were employed locally.

Underemployment featured in the jobs of the majority of respondents, and was investigated in different ways. While the vast majority, four out of five, considered that their current job was broadly at graduate level (*ie* their degree was relevant to getting or doing it), less than half said that a degree was an entry requirement and ten per cent were in jobs which previously had not been occupied by a graduate. However, three quarters felt that their degree had been helpful in getting their current job, though only half felt it had been the main influencing factor. Other factors of influence included the specific subject of their degree, work experience during/before university and since graduation, postgraduate qualifications, personal characteristics, and their personal contacts in companies. When asked to assess the extent of any underemployment being experienced, 26 per cent felt very underemployed and 33 per cent felt slightly underemployed. This was mainly caused by the lack of intellectual challenge in their jobs, the under-use of their degree skills and the feeling that they had more to offer than was being required of them.

A1.6 Career satisfaction

The main difficulties graduates had experienced in their careers to date were the lack of career development opportunities and dissatisfaction both with training provision in jobs and the lack of sufficiently challenging intellectual work. Experiences in their current job on the whole had lived up to initial expectations, the main exceptions being: the career opportunities available, training provided, and getting feedback on performance where expectations generally exceeded experiences. In general, they were mainly satisfied with their current job. Higher levels of dissatisfaction were recorded by graduates in lower skill level jobs and by those who perceived themselves to be very underemployed.

Career planning had been engaged in at various stages, but only one in three of the graduates had started thinking about careers before university and slightly more while at university. There was an increasing trend over the three years to start thinking about careers at an earlier age, and evidence that early career planning pays off in terms of gaining permanent employment and experiencing less unemployment. The university's Career Development Unit had a high level of usage, mainly during degree study (when 80 per cent had used its services), but also afterwards (40 per cent).

Since graduation, most graduates had experienced some difficulties with the development of their career, mostly relating to the lack of job opportunities available, but also due to an absence of career guidance or direction and a lack of specific skills training. Despite these difficulties, the overall level of satisfaction with career to date was comparatively high, although it appeared to be declining over time. In particular, the 1993 cohort were more dissatisfied with the lack of jobs available and the use of their skills and knowledge.

A1.7 Conclusion

In conclusion, this research has provided new insights into the employment experiences of graduates and their career progress over the first few years. It is the first large scale survey of this kind ever undertaken at the university, and hopefully will not be the last, as it has provided a wealth of new information about what graduates *really* do and how they feel about their jobs and careers. In particular, it has shown how labour market experiences change as time passes, and that measures of initial success in the labour market are not realistic to use as outcome measures for the majority of graduates. It has also highlighted the differences between graduates in their employment prospects, in particular from different degree disciplines, and the wide diversity of career routes being followed and job outcomes. Graduates are taking up a broad range of jobs, in some cases displacing less qualified people. Underemployment is affecting the majority of them, but is felt in different ways. So, too, is the lack of job opportunities available to develop subsequent careers in the ways they initially expected.

APPENDIX 2: SECOND FOLLOW UP SURVEY OF SUSSEX GRADUATES

Please answer the following questions as fully as you are able by ticking the boxes or writing in the spaces provided, and return the completed questionnaire to IES in the reply-paid envelope provided. All information will be treated as confidential. If you have any queries, please contact Emma Pollard or Helen Connor at IES: telephone 01273 686751. Thank you for your assistance.

1. We would like to know what you have been doing since you filled in the previous survey questionnaire which we sent to you in December 1994.

Please tick one box in the table below for each of the months shown, to indicate what you were mainly doing for all, or most, of that month.

Please note that:

In work means being employed in a full or part-time paid job, including an employer's graduate training scheme, or self-employment.

Further study means undertaking a full or part-time course (eg MSc, professional courses) or doing PhD research

Unemployed means not in work but seeking paid employment

Something else means none of the above applies but could include eg not working because of ill health, taking time out to travel, having a baby or caring for children.

If you were working and doing a part-time course, please tick the one activity which took up the majority of your time for most of that month.

What were you mainly doing in?	July 1995	December 1995	July 1996	December 1996
In work	☐ 1	☐ 1	☐ 1	☐ 1
In further study	☐ 2	☐ 2	☐ 2	☐ 2
Unemployed	☐ 3	☐ 3	☐ 3	☐ 3
Something else *(Please write in what this was)*	☐ 4	☐ 4	☐ 4	☐ 4

2. And what are you doing **now** (ie in May 1997)?

Please tick one box only (see notes at Q1 which apply here too) and then go to question indicated

In work ☐ 1 ***Go to Q3*** In further study ☐ 2 ***Go to Q5***

Something else ☐ 3 ***Go to Q7*** Unemployed ☐ 4 ***Go to Q6***

Please write in what this is .....

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3. For those currently in work

a) Are you:

Employed full-time (working 30 hours or more per week)? ☐ 1 ***Go to Q3b***

Employed part-time (working less than 30 hours per week)? ☐ 2 ***Go to Q3b***

Self-employed/working freelance? ☐ 3 ***Go to Q4***

b) If employed: what kind of contract do you have with your employer?

Temporary/fixed term (for 12 months or less) ☐ 1

Temporary/fixed term (for more than 12 months) ☐ 2

Permanent/continuing ☐ 3

c) What is the name of your employer? .....

d) In which business sector do you work? (*Please tick one box only*)

National/Local Government	☐ 01	Health	☐ 05	Education	☐ 09
Arts/media	☐ 02	Banking	☐ 06	Retail/distribution	☐ 10
Engineering/manufacturing	☐ 03	IT/business services	☐ 07	Hotel/catering	☐ 11
Research & Development Services	☐ 04	Other (*Please give details*)	☐ 08		

.....

e) Approximately how many employees are in your organisation in the UK?

Less than 20 ☐ 1 20-199 ☐ 2 200-999 ☐ 3 1,000+ ☐ 4

f) What is your job? (*Please give your job title and brief details on what you do*) .....

.....

.....

g) What is your annual salary? (*If working part-time please answer for the full-time equivalent*)

Under £10,000 ☐ 1 £10-15,999 ☐ 2 £16,000-19,999 ☐ 3 £20,000+ ☐ 4

h) When did you start your current job? ...../...../19.....

i) Do any of the following apply to your current job? (*please tick one box for each*)

a degree was a formal entry requirement	Yes ☐ 1	No ☐ 2
a degree was helpful in getting the job	Yes ☐ 1	No ☐ 2
the work requires graduate ability	Yes ☐ 1	No ☐ 2
the previous job holder was a graduate	Yes ☐ 1	No ☐ 2
entry was via a graduate trainee scheme	Yes ☐ 1	No ☐ 2

j) If a degree was **not a formal entry requirement** for your current job, do you feel the job has changed in any way so that it now requires graduate ability (eg been upgraded)?

Yes ☐ 1 No ☐ 2 Don't know/not sure ☐ 3

k) If you have changed either your job, employer or location in the last two years, can you briefly give the reasons for making this change:

i) I changed my employer because .....

ii) I changed my job because .....

iii) I changed my location because .....

NOW GO TO Question 8

4. For those in self-employment/freelance work:

a) What kind of work do you do? .....

b) When did you start working as a self-employed person/freelancer? ...../...../19.....
(Please give start of current period of self-employment)

c) Why have you become self-employed? .....

NOW GO TO Question 8

5. For those in further study:
Please give details below of:

a) Qualification being aimed at (eg MSc, PhD, MBA) and main subject area .....

b) When did you start this course/study? ...../...../19..... and

c) When do you expect to finish it? ...../...../19.....

e) Are your studying: full-time? ☐ 1 part-time? ☐ 2 at a distance? ☐ 3

NOW GO TO Question 7

6. For those who are currently unemployed and seeking work:

a) What kind of work are your mainly seeking? .....

b) When did you become unemployed? ...../...../19.....
(Please give start of your current period of unemployment)

c) What kind of difficulties, if any, have you encountered in finding a suitable job? .....

.....

7. If not in work at present:

a) Do you expect to start a job in the next year? Yes ☐ 1 No ☐ 2 Not sure ☐ 3

b) If yes, do you know what kind of work you hope to be doing? .....

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8 Career Development

a) How satisfied are you with your career development to date, in terms of the following?
(Please tick one box in each column)

	Not at all satisfied	Satisfied to some extent	Very satisfied	Not applicable
Salary/earnings	1	2	3	4
Level of responsibility in your work	1	2	3	4
Pace of career progress	1	2	3	4
Use made of your degree	1	2	3	4
Development of skills for future jobs/career	1	2	3	4
Overall career development	1	2	3	4

b) Who do you see as primarily responsible for developing your career?

Yourself ☐ 1 Your employer ☐ 2 Not sure ☐ 3

c) Do you consider yourself to be under-employed at present? *(Please tick one box)*

Very ☐ 1 Slightly ☐ 1 Not at all ☐ 1 Not in a job ☐ 4

If you wish to comment further about your jobs or career development to date, please do so on a separate piece of paper and return it with the questionnaire.

9 Personal Details

a) Where do you currently live? *Please give place of main residence (town/country)* .....

b) Have you obtained any postgraduate qualifications since you obtained your BA/BSc degree at Sussex (eg MSc, professional diplomas)?

Qualification ..... Subject .....

10. Finally, we may wish to undertake another follow-up survey in two years time or contact you for more details about your career development and work experiences to date. This will help the Career Development Unit at Sussex in giving guidance to current students about jobs and making career choices.

Please give any corrections to your name/address if different from the one on the envelope.
Also add telephone number and /or email address. Thank you.

Name ..... email: .....

Address .....

.....

Tel: ..... home/work

If you **do not** want to be contacted again please put an X in this box ☐ 1

Thank you for your assistance.
Please return the questionnaire in the reply paid envelope to: The Institute for Employment Studies, University of Sussex, Falmer, Brighton, BN1 9RF. Tel: 01273 686751.

Appendix 3: Methodology

A3.1 The survey

During early 1997, the names of the 1,065 graduates of Sussex University who had responded to the IES/CDU graduate careers survey in 1995 were extracted from the initial survey file. Although the actual number of questionnaires analysed in 1995 was 1,023, late replies from the original survey had boosted the total response to 1,065. Contact addresses used in the previous survey and information given in the questionnaire were checked against Sussex University's Alumni Office database to ensure the most up to date addresses for this sample were used.

The new 1997 questionnaire, a much shorter version of the 1995 questionnaire, was mailed to the sample on 25th April, along with an A4 brochure of summary findings from the 1995 survey. As with the original survey, graduates were given two targeted reminders, one in May and one in June. The survey was closed mid-July and the final number of valid responses was 605.

As noted in Chapter 1, the questionnaire for the 1997 survey was much shorter than the original questionnaire from the 1995 survey. Very little background personal information was collected as this was available from the original survey. The 1997 questionnaire focused on gathering information on how graduates had fared since the last survey. It was aimed to link the 1995 and 1997 datasets, on an individual case basis, to provide a full and detailed picture of the career progress and experiences of graduates over a period of up to six years. To enable the merging of the two sets of survey data, individuals were given the same identity number for the 1997 survey as they were given in the 1995 survey. Confidentiality of replies was maintained throughout.

The 1997 survey data from the 605 respondents were matched to the 1995 data from 1,023 graduates. The final merged data set contained 585 cases, as 20 cases from the 97 survey were missing from the 95 data. These 20 were late respondents to the original survey and their data was not included in the 95 dataset. It was decided to base the analysis for this report on the 585 matched respondents.

A3.2 Response rate

The response rate for the 1997 survey was high, and better than the response for the 1995 survey. Table A3.1 below provides details.

Of the 1,065 graduates contacted, 621 had returned completed questionnaires by the time of this report (605 by time the survey had closed), and 136 questionnaires were Post Office returns or inappropriate responses (in that either they failed to reach the named graduate and were returned by the Post Office or were completed by someone who was not included in the sample or should not have been included in the sample). This gives a response rate of 58 per cent and, taking account of questionnaires failing to reach the sample, an effective response rate of 67 per cent. The response rate for the questionnaires actually included in the analysis, based on the matched sample and ignoring late replies, is slightly lower at 63 per cent. As would be expected the response rate (effective matched response) reduces over time, with the 1991 cohort, whose graduates are further into their careers, having a slightly lower response rate than 1992 or 1993.

A3.3 Top-ups

It was decided during the project to top-up the sample of graduates by contacting a small group of graduates from the graduating years of 1991, 1992, and 1993 who had not responded to the 1995 survey sample. It became apparent during the process of checking addresses for the main sample that some graduates had not replied in 1995 but their address had been updated since then on the Alumni File. It was thought that one

Table A3.4: Survey response rate (for the 95 and 97 matched samples)

Year of Graduation	1993	1992	1991	All
Number of questionnaires				
– mailed	324	241	500	1065
– returned	230	174	353	757
– post office returns, inappropriate replies	38	35	63	136
Number of valid responses	192	139	290	621
– no match available	4	5	11	20
– late replies	5	4	7	16
Number of questionnaires analysed	183	130	272	585
% response rate	59.3	57.7	58.0	58.3
% effective response rate	67.1	67.5	66.4	66.8
% effective matched response rate	64.0	63.1	62.2	63.0

Source: IES Survey, 1997

of the reasons for non-response in 1995 was wrong address and that we might have more success in contacting them this time. This new group of 64 graduates were sent in July 1997, the 1997 survey questionnaire, the summary findings of the 1995 survey, and were also an additional brief questionnaire. This extra questionnaire collected key personal information and labour market status information (from graduation to December 1994) and was used to ensure comparable data was collected for this group. The new group were sent a reminder in late July and by the time of this report, 24 completed questionnaires had been returned.

A3.4 Data sets

The two surveys have produced several sets of data:

- The initial labour market experiences of 1,023 graduates — from completing their first degree to up to three years later.
- The recent experiences of 605 graduates who have been in the labour market for at least four years.
- Longitudinal career progression data on 585 graduates covering a period of up to six and a half years in the labour market. It is this dataset which has been used in this report. With further work it could be expanded to contain 645 individuals by adding in the data from the unmatched questionnaires, the late replies and the top-up sample. This sample of 645 could then be used in the future to follow the careers of graduates into the 21st century.

A3.5 Achieved sample

The following tables (A3.2 to 3.11) present the details of the sample breakdown for the 585 respondents (*ie* the matched sample) which are discussed in Chapter 1

Table A3.2: Year of graduation

	Number	Percent
1991	272	47
1992	130	22
1993	183	31
N =	585	*100*

Source: IES/CDU Surveys 1995 and 1997

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Table A3.3: Gender composition (percentages)

	1991	1992	1993	All years	N =
Male	40	37	43	40	237
Female	60	63	57	60	348

Source: IES/CDU Surveys 1995 and 1997

Table A3.4: Age composition (percentages)

	1991	1992	1993	All Years	N =
Mature* entrant	16	13	17	16	89
Traditional entrant	84	87	83	84	487

*Aged over 21 on entry

Source: IES/CDU Surveys 1995 and 1997

Table A3.5: Ethnic group(percentages)

	1991	1992	1993	All years	N =
White	92	91	91	91	530
Black	2	2	2	2	11
Asian	4	5	4	5	26
Other	2	2	3	3	15

Source: IES/CDU Surveys 1995 and 1997

Table A3.6: Entry qualifications (percentages)

	1991	1992	1993	Total	N =
'A' level	89	86	84	87	506
Vocational	3	6	4	4	25
Other	8	8	12	9	52

Source: IES/CDU Surveys 1995 and 1997

Table A3.7: Subject breakdown (percentages)

	1991	1992	1993	All years	N =
Biological Sciences	12	12	12	12	69
Physical Sciences	9	14	17	13	73
Mathematical Sciences	16	17	15	16	92
Engineering/technology	6	3	6	5	31
Social Science	35	30	27	31	183
Languages	13	14	13	13	76
Humanities	9	11	9	9	55
Creative Arts	1	0	2	1	6

Source: IES/CDU Surveys 1995 and 1997

Table A3.8: Subject category (broad groups) (percentages)

	1991	1992	1993	All years	N =
Pure Science	21	25	29	24	142
Applied Science	22	20	21	21	123
Social Science	35	30	27	31	183
Other Arts	23	25	24	23	137

Source: IES/CDU Surveys 1995 and 1997

Table A3.9: Subject breakdown by gender

	Male		Female	
	N	%	N	%
Biological Sciences	18	8	51	15
Physical Sciences	42	18	31	9
Mathematical Sciences	67	28	25	7
Engineering/technology	26	11	5	1
Social Science	51	22	132	38
Languages	15	6	61	18
Humanities	17	7	38	11
Creative Arts	1	0	5	1
All	*237*		*348*	

Source: IES/CDU Surveys 1995 and 1997

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Table A3.10: Degree class (percentages)

	1991	1992	1993	Total	N =
First	8	9	14	10	58
Upper second	48	55	50	50	293
Lower second or below	44	36	36	40	233

Source: IES/CDU Surveys 1995 and 1997

Table A3.11: Current location (percentages)

	1991	1992	1993	Total	N =
East/West Sussex	19	22	28	23	131
Greater London	31	32	25	30	172
South other	25	23	29	26	149
England other	14	13	9	12	70
Wales/Scotland/NI	1	3	3	2	13
Other EC countries	4	3	2	3	19
Other Europe	2	0	1	1	6
Other	4	3	4	4	22

Source: IES/CDU Surveys 1995 and 1997

Appendix 4: Tables on Career Progression

The following tables relate to the discussion in Chapter 5 on career progression.

Table A4.1: Employment status at six monthly intervals — 1991 cohort (per cent)

	6 mths	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5 yrs	5.5 yrs	6 yrs
Work	57	66	62	67	71	75	78	79	81	85	84	86
Further studies	24	18	23	20	22	18	15	12	12	10	10	10
Unemployed	15	8	11	9	5	5	6	4	3	3	3	3
Other	4	7	3	5	2	2	1	6	3	2	3	2
N =	*270*	*269*	*269*	*267*	*269*	*267*	*269*	*272*	*271*	*271*	*271*	*272*

Source: IES/CDU Surveys, 1995 and 1997

Table A4.2: Employment status at six monthly intervals — 1992 cohort (per cent)

	6 mths	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5 yrs
Work	57	70	66	69	73	77	77	82	83	85
Further studies	23	18	27	19	18	17	14	11	9	7
Unemployed	19	8	4	7	8	3	5	3	6	5
Other	2	5	4	5	2	3	5	4	3	2
N =	*130*	*129*	*128*	*130*	*129*	*129*	*128*	*129*	*128*	*130*

Source: IES/CDU Surveys, 1995 and 1997

Table A4.3: Employment status at six monthly intervals — 1993 cohort (per cent)

	6 mths	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs
Work	57	60	72	77	75	78	80	85
Further studies	25	19	14	12	13	11	9	8
Unemployed	14	15	10	8	8	6	4	4
Other	4	7	4	3	4	5	7	4
N =	*182*	*182*	*183*	*180*	*181*	*182*	*182*	*183*

Source: IES/CDU Surveys, 1995 and 1997

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Table A4.4: Employment status at six monthly intervals for women and men

	6 mths	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5* yrs	5.5** yrs	6** yrs
						WOMEN						
Work	61	67	67	73	73	77	78	83	82	86	88	86
Further studies	23	17	22	18	19	15	15	10	11	8	8	9
Unemployed	12	8	7	6	5	4	4	2	3	4	1	3
Other	4	8	4	4	3	3	4	5	4	3	3	2
						MEN						
Work	50	62	64	67	72	75	79	80	81	84	79	85
Further studies	25	20	19	15	17	16	10	11	12	11	12	10
Unemployed	21	13	13	12	9	6	8	6	5	4	6	3
Other	4	5	4	5	2	4	3	4	2	2	3	3

* 1991 and 1992 cohorts only
** 1991 cohort only

Source: IES/CDU Surveys, 1995 and 1997

Figure A4.5: Employment status at six monthly intervals for mature and young graduates

	6 mths	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5 yrs	5* yrs	5.5** yrs	6** yrs
						MATURE						
Work	53	66	66	67	72	74	75	76	85	85	79	86
Further studies	22	16	18	17	18	14	6	6	5	2	7	7
Unemployed	21	10	11	13	5	6	10	8	7	9	7	–
Other	5	8	5	3	6	7	9	10	3	5	7	7
						YOUNG						
Work	58	65	66	71	73	77	80	83	81	85	85	85
Further studies	24	19	22	17	18	15	14	11	12	10	10	10
Unemployed	14	10	9	8	7	5	4	3	4	3	3	3
Other	4	6	3	5	2	3	3	4	3	2	2	1

* 1991 and 1992 cohorts only
** 1991 cohort only

Source: IES/CDU Surveys, 1995 and 1997

Table A4.6: Employment status at six monthly intervals by degree subject (per cent)

	6 mths	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5* yrs	5* yrs	5.5** yrs	6** yrs
PURE SCIENCES												
Work	52	59	60	62	61	65	70	76	74	76	77	77
Further studies	30	28	31	25	30	26	23	20	20	17	20	18
Unemployed	16	8	6	9	7	6	6	3	3	3	2	4
Other	3	6	2	4	2	4	2	1	2	2	2	2
N =	*141*	*140*	*141*	*141*	*141*	*141*	*141*	*142*	*89*	*89*	*56*	*56*
APPLIED SCIENCES												
Work	63	76	74	80	84	87	88	87	82	91	85	81
Further studies	19	17	10	8	8	8	7	7	12	9	12	10
Unemployed	15	6	11	7	5	1	5	3	4	–	3	7
Other	2	1	5	6	3	4	1	3	2	–	–	2
N =	*123*	*123*	*123*	*122*	*122*	*121*	*122*	*123*	*85*	*85*	*59*	*59*
SOCIAL SCIENCES												
Work	56	63	66	70	75	78	81	85	86	86	88	91
Further studies	24	15	19	18	17	13	12	7	8	7	5	7
Unemployed	16	12	11	8	7	6	3	4	3	4	2	–
Other	4	10	4	4	1	3	4	5	4	4	4	2
N =	*181*	*180*	*180*	*179*	*180*	*180*	*180*	*182*	*132*	*133*	*94*	*95*
ARTS AND HUMANITIES												
Work	57	64	65	70	72	78	77	77	83	85	84	90
Further studies	23	14	23	16	16	14	10	9	7	5	5	5
Unemployed	15	14	8	10	7	5	8	4	7	7	7	2
Other	5	8	4	4	4	3	6	10	4	2	5	3
N =	*137*	*137*	*136*	*135*	*136*	*136*	*136*	*137*	*93*	*94*	*62*	*62*

* 1991 and 1992 cohorts only;
** 1991 cohort only

Source: IES/CDU Surveys, 1995 and 1997

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Table A.4.7: Employment status at six monthly intervals for graduates with first/upper second and lower second/third degrees

	6 mths	1 yr	1.5 yrs	2 yrs	2.5 yrs	3 yrs	3.5 yrs	4 yrs	4.5* yrs	5* yrs	5.5** yrs	6** yrs
FIRST/UPPER SECOND												
Work	58	61	61	66	69	72	75	77	78	82	80	83
Further studies	27	22	26	22	23	20	16	13	16	13	12	11
Unemployed	12	10	9	9	6	4	6	4	4	3	5	4
Other	3	7	3	4	3	3	3	5	3	2	3	3
LOWER SECOND/THIRD												
Work	55	71	73	77	79	83	84	88	86	89	89	89
Further studies	20	13	14	10	11	8	8	6	5	4	7	8
Unemployed	21	10	10	8	7	6	4	3	5	4	2	1
Other	4	6	4	6	3	4	4	4	4	3	3	2

* 1991 and 1992 cohorts only
** 1991 cohort only

Source: IES/CDU Surveys, 1995 and 1997

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